

## **REMARKS**

### **STATEMENT OF COMMON OWNERSHIP**

The present application, Serial No. 10,606,523, and Patent No. 6,061,114 to Callegari were, at the time the invention of Application Serial No. 10,606,523 was made, owned by International Business Machines Corporation.

The present application, Serial No. 10,606,523, and Patent No. 6,682,786 to Lien were, at the time the invention of Application Serial No. 10,606,523 was made, owned by International Business Machines Corporation.

### **RESPONSE TO REJECTIONS**

Claims 14-21 are pending. The Examiner's reconsideration of the objections and rejections is respectfully requested in view of the amendments and remarks.

Claims 8-11 and 14-19 have been rejected to under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-6 of Callegari et al. (U.S. Patent No. 6,665,033), hereinafter Callegari '033.

A terminal disclaimer is attached hereto with respect to Callegari '033. The Examiner's reconsideration of the present rejection is respectfully requested.

Claims 8-11 and 14-19 have been rejected to under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claims 1-2, 5-7, 9, 12 and 14 of Katoh et al. (U.S. Patent No. 6,485,614).

A terminal disclaimer is attached hereto with respect to Katoh. The Examiner's reconsideration of the present rejection is respectfully requested.

Claims 8, 10 and 11 have been rejected to under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2, 9-11 and 17 of Callegari et al. (U.S. Patent No. 6,061,114), hereinafter Callegari '114.

Claims 8, 10 and 11 have been cancelled. The Examiner's reconsideration of the rejection is respectfully requested.

Claims 8-11 and 14-19 have been rejected to under 35 U.S.C. 102(e) be being anticipated by Callegari (U.S. Patent No. 6,061,114).

Claims 8-11 have been cancelled. The Statement of Common Ownership (see above) is believed to overcome the present rejection with respect to Claims 14-19. Reconsideration of the rejection is respectfully requested.

Claims 8, 10 and 11 have been rejected under 35 U.S.C. 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. 103(a) as being obvious over IBM Tech. Disc. Bull., vol. 34, #4B (herein after the Bulletin). The Examiner stated essentially that the Bulletin teaches and/or suggests all the limitations of claims 8, 10 and 11.

Claims 8, 10 and 11 have been cancelled. The Examiner's reconsideration of the rejection is respectfully requested.

Claims 8, 12 and 13 have been rejected under 35 U.S.C. 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. 103(a) as being obvious over Chaudhari et a. (5,770,826). The Examiner stated essentially that Chaudhari teaches and/or suggests all the limitations of Claims 8, 12 and 13.

Claims 8, 12 and 13 have been cancelled. Reconsideration of the rejection is respectfully requested.

Claims 8, 12 and 13 have been rejected to under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 24, 25 and 34-36 of Andry et al. (U.S. Patent No. 6,724,449).

Claims 8, 12, and 13 have been cancelled. Reconsideration of the rejection is respectfully requested.

Claims 8, 12 and 13 have been rejected under 35 U.S.C. 102(b) as being anticipated by Andry et al. (U.S. Patent No. 6,724,449). The Examiner stated essentially that Andry teaches all the limitations of claims 8, 12 and 13.

Claims 8, 12, and 13 have been cancelled. Reconsideration of the rejection is respectfully requested.

Claims 8, 12-14, 20 and 21 have been rejected under 35 U.S.C. 102(e) as being anticipated by Lien et al. (U.S. Patent No. 6,682,786). The Examiner stated essentially that Lien teaches all the limitations of claims 8, 12-14, 20 and 21.

Claims 8, 12, and 13 have been cancelled. The Statement of Common Ownership (see above) is believed to overcome the present rejection with respect to Claims 14, 20, and 21. Reconsideration of the rejection is respectfully requested.

Claims 8, 12-14, 20 and 21 have been rejected to under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 26 of Samant et al. (U.S. Patent No. 6,519,018).

A terminal disclaimer is attached hereto with respect to Samant. The Examiner's reconsideration of the present rejection is respectfully requested. The Examiner's reconsideration of the rejection is respectfully requested.

Claims 8, 12-14, 20 and 21 have been rejected under 35 U.S.C. 102(e) as being anticipated by Samant et al. (U.S. Patent No. 6,519,018). The Examiner stated essentially that Samant teaches all the limitations of claims 8, 12-14, 20 and 21.

Claim 14 claims, *inter alia*, “saturating dangling bonds on the surface caused by the bombarding step; and quenching the surface with a reactive component to saturate dangling bonds on the surface.”

Samant teaches an ion bombardment by ion beam generated from a gas such as helium, argon, and neon (see col. 7, lines 11-36). Samant does not teach “saturating dangling bonds on the surface caused by the bombarding step; and quenching the surface with a reactive component to saturate dangling bonds on the surface” as claimed in claims 8 and 14. Samant teaches the use of a gas during ion bombardment. Samant’s use of the gas during ion bombardment does not anticipate both saturating and quenching steps, much less quenching as the treatment of a surface layer subsequent to ion bombardment (see page 16 lines 18-20 of the disclosure). One of ordinary skill in the art would appreciate in light of the disclosure, that quenching implies a treatment subsequent to ion bombardment. Samant does not teach saturating and quenching steps, nor a treatment of a surface layer subsequent to the ion bombardment. Therefore, Samant fails to teach all the limitations of Claim 14.

Claims 8, 12, and 13 have been cancelled. Claims 20 and 21 depend from claim 14. The dependent claims are believed to be allowable for at least the reasons given for Claim 14. The Examiner’s reconsideration of the rejection is respectfully requested.

Claims 8, 10 and 11 were rejected under 35 U.S.C. 103(a) as unpatentable over Shimada et al., (US 5,030,322) or Nakabayahsi et al., (US 5,710,608) in view of Pierson et al., (US 2001/0025826 A1). The Examiner stated essentially that the combined teachings of Shimada and

Pierson, or the combined teachings of Nakabayahsi and Pierson teach or suggest all the limitations of the rejected claims.

Claims 8, 10 and 11 have been cancelled. The Examiner's reconsideration of the rejection is respectfully requested.

For the forgoing reasons, the application, including claims 14-21, is believed to be in condition for allowance. Early and favorable reconsideration of the case is respectfully requested.

Respectfully submitted,

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